CarnoSyn® Beta-Alanine Clinical Research

Clinical Claims At 2.4g Dosage Per Day

- Improve muscle endurance
- Support brain health, cognitive function, & memory
- Improve muscle function
- Support healthy circulation

Additional Clinical Claims At 3.2g+ Per Day

- Increase working & exercise capacity
- Increase muscle strength
- Boost detoxification & antioxidant levels
- Speed recovery from intense exercise
- Enhance the buffering capacity of muscle
- Elevate muscle carnosine levels
- Decrease acidosis
- Delay fatigue during workout
- Enhance mental focus
- Improve speed
- Enhance exercise training
- Improve overall muscle performance

See full list of clinical studies on the next page.

CarnoSyn®
www.carnosyn.com

TriBsyn™
www.tribsyn.com

SR CarnoSyn®
www.srcarnosyn.com

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Clinical studies using a daily dosage of 2.4g of beta-alanine:

1. β-Alanine supplementation improves fractional anisotropy scores in the hippocampus and amygdala in 60-80-year-old men and women. Full text open access
2. Role of β-Alanine Supplementation on Cognitive Function, Mood, and Physical Function in Older Adults; Double-Blind Randomized Controlled Study. Full text open access
3. β-Alanine supplementation increased physical performance and improved executive function following endurance exercise in middle aged individuals. Full text open access
4. Oral Nutritional Supplement Fortified with Beta-Alanine Improves Physical Working Capacity in Older Adults: A Randomized, Placebo Controlled Study. Full text open access
5. The effect of beta-alanine supplementation on neuromuscular fatigue in elderly (55-92 Years): a double-blind randomized study. Full text open access

Clinical studies using a daily dosage of 3.2g or higher of beta-alanine:

1. β-alanine supplementation improves YoYo intermittent recovery test performance. Full text open access
2. Short-duration beta-alanine supplementation increases training volume and reduces subjective feelings of fatigue in college football players. Abstract
3. Beta-alanine and the hormonal response to exercise. Abstract
4. Exercise-induced oxidative stress: the effects of β-alanine supplementation in women. Abstract
5. Effect of Beta-Alanine Supplementation on 800 m Running Performance. Abstract
6. β-alanine supplementation elevates intramuscular carnosine content and attenuates fatigue in men & women similarly but does not change muscle l-histidine content. Abstract
7. β-alanine supplementation improves isometric endurance of the knee extensor muscles. Abstract
8. Additive effects of beta-alanine and sodium bicarbonate on upper-body intermittent performance. Abstract
9. Effect of β-alanine, with & without Sodium Bicarbonate, on 2000m Rowing Performance. Abstract
10. Influence of training status on high-intensity intermittent performance in response to β-alanine supplementation. Full text open access
11. The Effects of Beta-Alanine Supplementation on Physical Working Capacity at Heart Rate Threshold. Abstract
12. The effect of β-alanine supplementation on cycling time trials of different length. Abstract
13. Metabolic consequences of β-alanine supplementation during exhaustive supramaximal cycling and 4000-m time-trial performance. Abstract
14. Beta-alanine supplementation enhances judo-related performance in highly-trained athletes. Abstract
15. β-alanine upplementation improves tactical performance but not cognitive function in combat soldiers. Full text open access
16. Twenty-four Weeks β-alanine Supplementation on Carnosine Content, Related Genes, and Exercise. Abstract
17. β-alanine Supplementation Improves Throwing Velocities in Repeated Sprint Ability and 200-m Swimming Performance in Young Water Polo Players. Abstract
18. Four Weeks of β-alanine Supplementation Improves High-Intensity Game Activities in Water Polo. Abstract
19. Distinct Effects of Repeated-Sprint Training in Normobaric Hypoxia and β-alanine Supplementation. Abstract
20. β-alanine supplementation augments muscle carnosine content and attenuates fatigue during repeated isokinetic contraction bouts in trained sprinters. Abstract
21. Additive Benefits of β-alanine Supplementation and Sprint-Interval Training. Abstract
22. The ergogenic effect of beta-alanine combined with sodium bicarbonate on high-intensity swimming performance. Abstract
23. The effect of β-alanine and NaHCO3 co-ingestion on buffering capacity and exercise performance with high-intensity exercise in healthy males. Abstract
24. Effects of twenty-eight days of beta-alanine and creatine monohydrate supplementation on the physical working capacity at neuromuscular fatigue threshold. Abstract
25. Effects of β-alanine supplementation on the onset of neuromuscular fatigue and ventilatory threshold in women. Abstract
26. Influence of β-alanine supplementation on skeletal muscle carnosine concentrations and high intensity cycling capacity. Abstract
27. Kinetics of Muscle Carnosine Decay after β-alanine Supplementation: A 16-Week Washout Study. Abstract
28. Beta-alanine supplementation reduces acidosis but not oxygen uptake response during high-intensity cycling exercise. Abstract
29. Carnosine loading and washout in human skeletal muscles. Abstract
30. Muscle carnosine loading by beta-alanine supplementation is more pronounced in trained vs. untrained muscles. Abstract
31. Exercise training and Beta-alanine-induced muscle carnosine loading. Abstract
32. Effects of 4 Weeks of β-alanine Supplementation on Swim-Performance Parameters in Water Polo Players. Abstract
33. β-alanine Supplementation's Improvement of High-Intensity Game Activities in Water Polo. Abstract
34. Exercise and β-alanine supplementation on carnosine-acrolein adduct in skeletal muscle. Abstract
35. Effect of 10 week beta-alanine supplementation on competition and training performance in elite swimmers. Abstract
36. Comparison of Two β-alanine Dosing Protocols on Muscle Carnosine Elevations. Abstract
37. Comparison of Two β-alanine Dosing Protocols Using a Sustained Release Formulation on Muscle Carnosine Elevations. Abstract
38. Beta-Alanine Supplementation Improves Throwing Velocities in Repeated Sprint Ability and 200-m Swimming Performance in Young Water Polo Players. Abstract
39. β-alanine Supplementation Does Not Augment the Skeletal Muscle Adaptive Response to 6 Weeks of Sprint Interval Training. Abstract
40. β-alanine Plus Sodium Bicarbonate Co-Supplementation Does Not Decrease Neuromuscular Fatigue in Swimming. Abstract
41. Beta-alanine (Carnosyn™) supplementation in elderly subjects (60-80 years): effects on muscle carnosine content and physical capacity. Abstract
42. beta-Alanine supplementation augments muscle carnosine content and attenuates fatigue during repeated isokinetic contraction bouts in trained sprinters. Abstract
43. Effect of beta-alanine supplementation on 2000-m rowing-ergometer performance. Abstract
44. Effects of 28-Day Beta-Alanine Supplementation on Isokinetic Exercise Performance and Body Composition in Female Masters Athletes. Abstract
45. β-alanine supplementation enhances human skeletal muscle relaxation speed but not force production capacity. Abstract
46. Changes in muscle carnosine of subjects with 4 weeks supplementation with a controlled release formulation of beta-alanine (Carnosyn™), and for 6 weeks post. Abstract
47. The absorption of orally supplied beta-alanine and its effect on muscle carnosine synthesis in human vastus lateralis. Abstract
48. The plasma concentration-time profile of beta-alanine using a controlled-release formulation (Carnosyn®). Abstract
49. Effect of beta-alanine, with and without sodium bicarbonate, on 2000-m rowing performance. Abstract
50. Exercise alters and β-alanine combined with exercise augments histidyl dipeptide levels and scavenges lipid peroxidation products in human skeletal muscle. Full text open access
51. Effect of creatine and beta-alanine supplementation on performance and endocrine responses in strength/power athletes. Abstract
52. β-alanine ingestion increases muscle carnosine content and combat specific performance in soldiers. Full text open access
53. Effect of High-Dose, Short-Duration β-alanine Supplementation on Circulating IL-10 Concentrations During Intense Military Training. Abstract
54. Ingesting a preworkout supplement containing caffeine, creatine, β-alanine amino acids, and B vitamins for 28 days is both safe and efficacious in recreationally active men. Abstract
55. The effect of 4 weeks beta-alanine supplementation and isokinetic training on carnosine concentrations in type I and II human skeletal muscle fibres. Abstract
56. Effects of 28 days of beta-alanine and creatine supplementation on muscle carnosine, body composition and exercise performance in recreationally active females. Full text open access
57. Effect of β-alanine plus sodium bicarbonate on high-intensity cycling capacity. Abstract
58. 24-Week β-alanine ingestion does not affect muscle taurine or clinical blood parameters in healthy males. Abstract
59. The influence of β-alanine supplementation on markers of exercise-induced oxidative stress. Abstract
60. β-alanine dose for maintaining moderately elevated muscle carnosine levels. Abstract
61. Meal and beta-alanine coingestion enhances muscle carnosine loading. Abstract
62. Effect of two β-alanine dosing protocols on muscle carnosine synthesis and washout. Abstract
63. Comparison of sustained-release and rapid-release β-alanine formulations on changes in skeletal muscle carnosine and histidine content and isometric performance following a muscle-damaging protocol. Abstract
64. β-alanine supplementation elevates intramuscular carnosine content and attenuates fatigue in men and women similarly but does not change muscle l-histidine content. Abstract
65. Effects of High-Dose, Short-Duration β-alanine Supplementation on Cognitive Function, Mood, and Circulating Brain-Derived Neurotropic Factor (BDNF) in Recreationally-Active Males Before Simulated Military Operational Stress. Abstract
66. Effects of 28 days of beta-alanine and creatine monohydrate supplementation on aerobic power, ventilatory and lactate thresholds, and time to exhaustion. Abstract

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